POWERPAD®
2400 DC

Safety Instruction
& User Manual

electrovaya

Read all the information in this Safety Instruction and User Manual before using PowerPad, in order to use it safely and achieve its maximum life span.

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Safety Instructions

WARNING:

Failure to follow these safety instructions could result in fire, electrical shock, release of harmful vapors, personal injury and other damages. Only manufacturer authorized personnel can open/repair the PowerPad. The warranty will be voided if these instructions are not followed.

- Do not dissemble, open, abuse, drop, crush, bend, deform or puncture the PowerPad.
- Do not change the factory settings of the PowerPad.
- Do not charge the PowerPad from DC input and AC input simultaneously.
- Do not store the PowerPad for more than 30 days. Charge or use the PowerPad at least once within a 30 day period.
- Maintain the temperature range between 0°C (32°F) to 45°C (113°F) during operation and 0°C (32°F) to 35°C (95°F) during storage.
- Do not short-circuit the PowerPad. Charging the PowerPad incorrectly or bringing metal objects close to the PowerPad can result into short-circuit.
- Do not insert any foreign object inside the ports.
- Avoid the PowerPad from excessive shock or vibration.
- Do not expose the PowerPad to fire, water or any liquid.
- Keep the PowerPad away from children.
- Do not use the PowerPad for electronic devices other than for its intended use.

CAUTION:

Lithium ion batteries contain electrolyte, which is a flammable material in the form of liquid or vapor. Electrolyte may ignite, explode or release harmful vapors. In case any of these events occur, evacuate the area immediately.

If contact with electrolyte occurs, immediately flush the area with water thoroughly until no evidence of the fluid remains and seek medical attention. If you inhaled the vapor, seek medical attention immediately.

Getting Started

Unpack and make sure there are no damages to the PowerPad. The PowerPad will not be fully charged when it is shipped. Read all the instructions before using it. PowerPad features DC output port(s), an AC input port, a DC input port, an ON/OFF switch, and a battery status LED.

The serial number can be found on the label on top of the PowerPad.

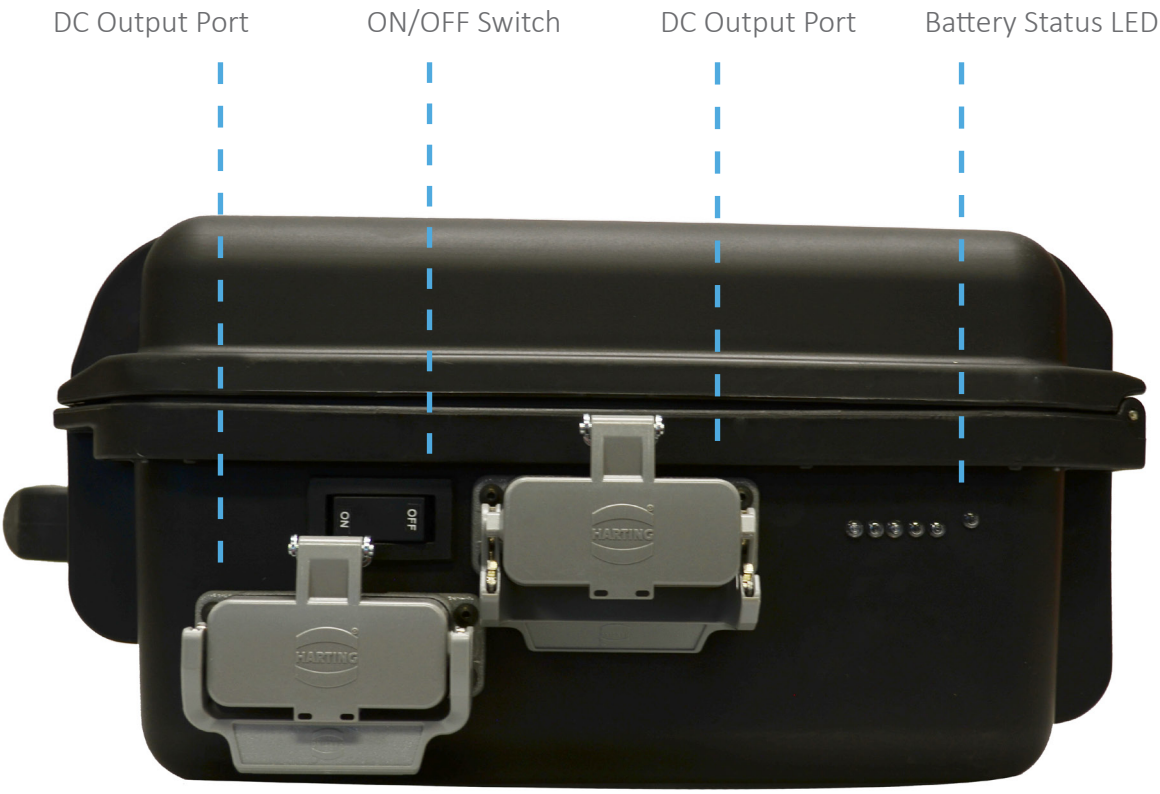
Put serial number for reference

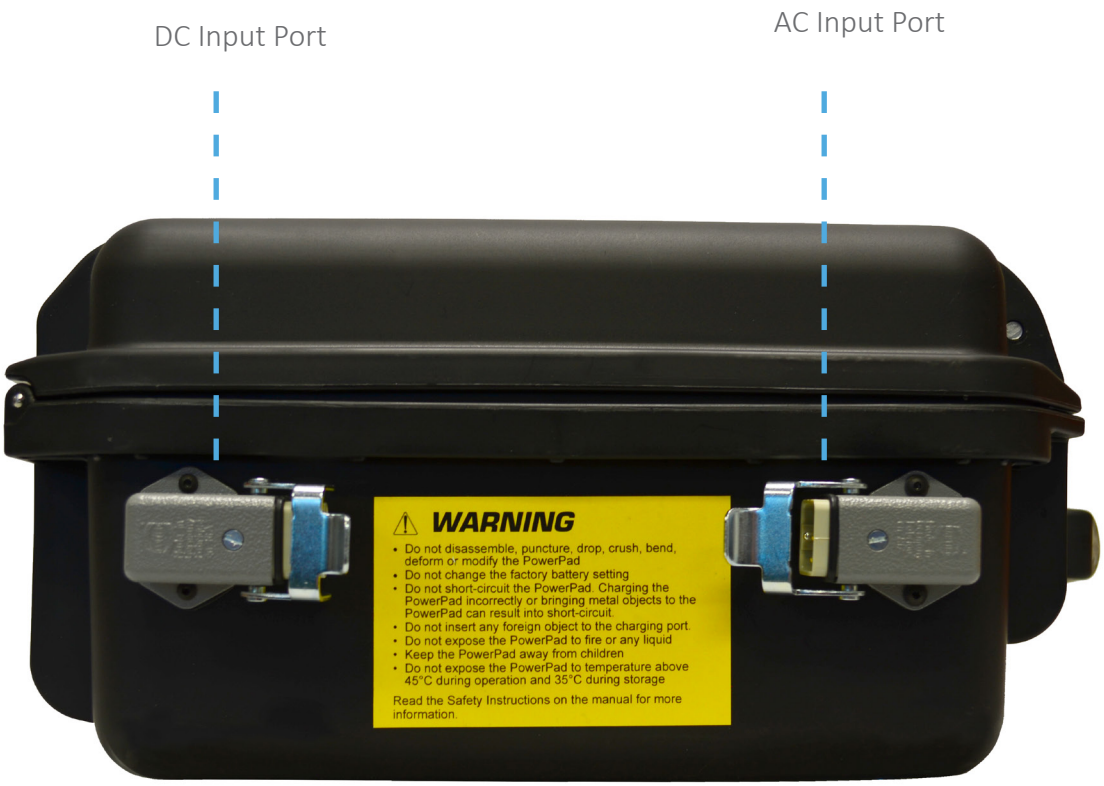
[ ]

PowerPad® 2400DC

P/N	:	80-000007-00
Serial No.	:	XX-XXX
Capacity	:	2400Wh / 200Ah
Max. Output Rating	:	300W
Output Voltage Range	:	10 - 16VDC

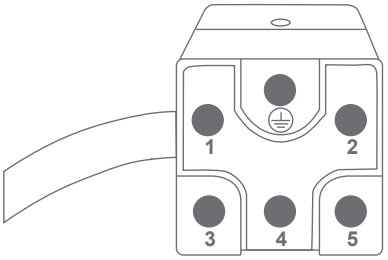
powered by electrovaya


DC Output Port
ON/OFF Switch
DC Output Port
Battery Status LED
ON
OFF
HARTING
HARTING


DC Input Port
AC Input Port
WARNING
• Do not disassemble, puncture, drop, crush, bend, deform or modify the PowerPad
• Do not change the factory battery setting
• Do not short-circuit the PowerPad. Charging the PowerPad incorrectly or bringing metal objects to the PowerPad can result into short-circuit.
• Do not insert any foreign object to the charging port.
• Do not expose the PowerPad to fire or any liquid
• Keep the PowerPad away from children
• Do not expose the PowerPad to temperature above 45°C during operation and 35°C during storage
Read the Safety Instructions on the manual for more information.

What to Prepare

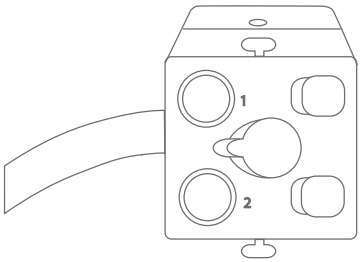
AC Input Connector



1: Line
⏚: Ground
4: Neutral

Harting Part Description	Part Number	Quantity Required
Female Insert Small- 14AWG	09120053101	1
Female Contact- 14 AWG	09330006202	2
Cable Housing Head- Small	19200030410	1
Wire- 14AWG		Accordingly to Length

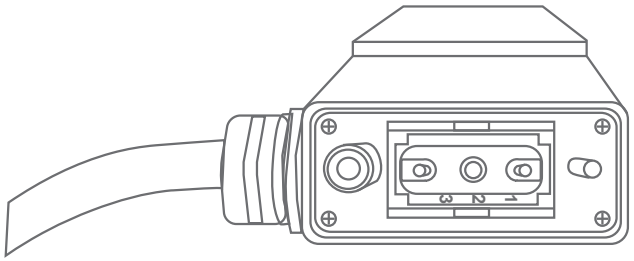
DC Input Connector



1: (+) Positive
2: (–) Negative

Harting Part Description	Part Number	Quantity Required
Female Insert Small- 10AWG	09120023151	1
Female Contact- 10 AWG	09320006208	2
Cable Housing Head- Small	19200030410	1
Wire- 10AWG		Accordingly to Length

DC Output Connector

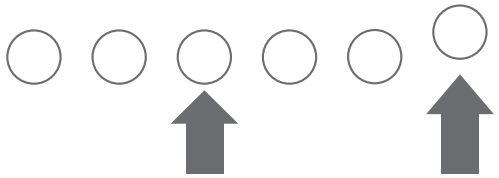


1: 12 V
2: 16V
3: (-) Negative

Harting Part Description	Part Number	Quantity Required
Male Insert Large - 10AWG	09140033001	1
Male Contact- 10AWG	09320006108	3
Frame Holder- Large	09140000304	1
Cable Housing Head- Large	09200101440	1
Cable Retainer	09000005085	1
Wire- 10AWG		Accordingly to Length

Battery Status LED

PowerPad features LED lights that show the status of the PowerPad. The 5 battery level indicator lights on the left show how much capacity is remaining. The charging indicator light on the right will turn green while the PowerPad is charging.



Battery Status	Charging	Operating
100%		
80%		
60%		
40%		
20%		
0%		

- When the PowerPad is charged, the charging indicator light will turn green and all the battery level indicator lights will blink.
- When the PowerPad is in use and the battery level is above 60%, the battery level indicator lights will have steady green lights. When it is below 60%, a yellow light will blink and when it is below 40%, a red light will blink. It is recommended to charge the PowerPad at this time.

Alarm

- The alarm will make 3 beeps with 3 second intervals when the battery level is lower than 20%. When the beeps start, turn off the PowerPad immediately and charge it.
- The 3 beeps will continue for 100 seconds, then make a steady beep for 60 seconds. The PowerPad will shut down automatically after the steady beep ends.
- Unless the battery level is back to 20% within 100 seconds after the 3 beeps begin, the steady beep will still start and shut down the PowerPad even if its charged.

Charging PowerPad

PowerPad can be charged either from AC or DC power source according to the specifications below.

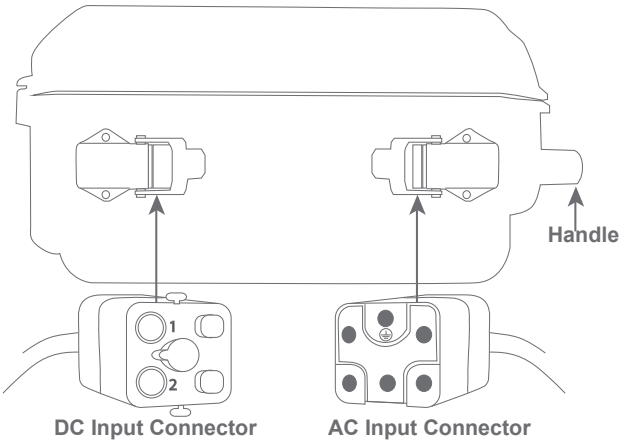
PowerPad AC Input Specifications	
Frequency	50/60 Hz, single phase
AC Input Voltage	110- 230V
PowerPad DC Input Specifications	
DC Input Voltage	12- 18 V

WARNING:

Do not charge the PowerPad from the AC and the DC input simultaneously. Only charge the PowerPad from one charging source.

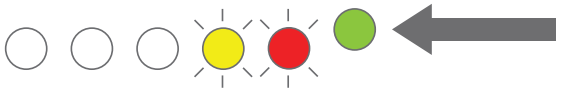
Step 1: Plug-in the AC input connector or DC input connector to the charging ports

Open the lid of the AC or DC input port and be certain that there are no foreign objects inside the port. Plug-in the AC input connector to the AC input port or plug-in the DC input connector to the DC input port. The numbers on the connectors must be connected to the same numbers on the input ports. Check that the plug is inserted completely tight and not loose.



Step 2: Check if the charging indicator lamp is green

When the input connector is inserted into the input port, the PowerPad will turn on automatically. Check if the charging indicator light is green. If the light does not turn on, be sure that the specifications of the AC or DC input are the same specifications with the PowerPad.



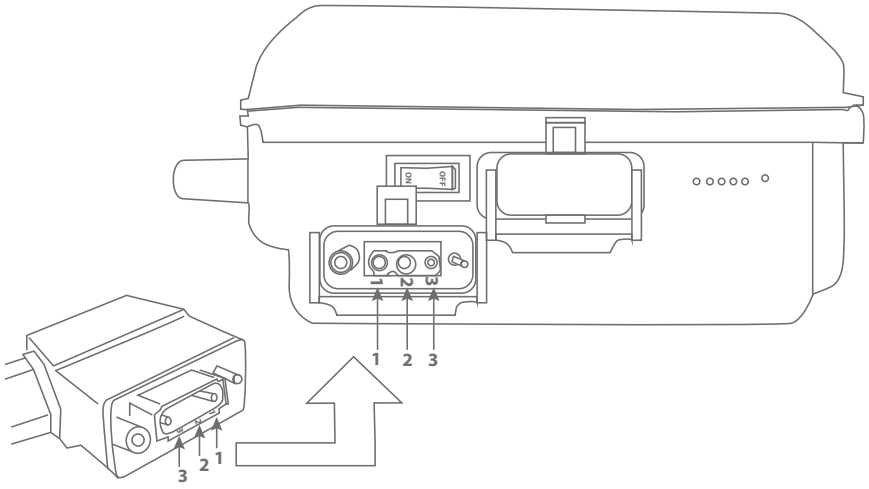
Using PowerPad

PowerPad has DC output port(s) and is compatible with the DC device(s) with the specifications below.

PowerPad DC Output Specifications	
DC Output Voltage	12-16 V
Maximum Power	300 Watts (Total of both DC devices)

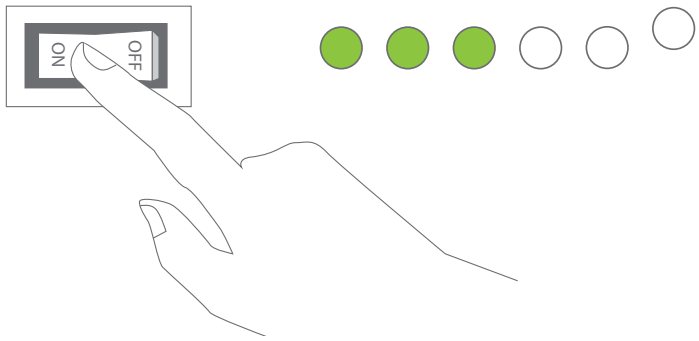
Step 1: Plug-in the DC connector to the DC output port

Open the lid of the DC output port and make sure there are no foreign objects inside the ports. The numbers on the DC output connectors must be connected to the same numbers on the DC output ports. Check that the plug is inserted completely tight and not loose.



Step 2: Turn on the PowerPad

Turn the ON/OFF switch on. Check if the Battery Status LEDs are on to see if the PowerPad is on.



Operating Temperature

The operating temperature of the PowerPad is between 0°C (32°F) to 45°C (113°F). However, to extend the life of the battery, it is recommended to maintain the temperature range between 10°C (50°F) to 35°C (95°F).

WARNING:

The PowerPad will stop operating when it's exposed to temperature below 0°C (32°F) and above 45°C (113°F). However, the PowerPad can resume operation once it's brought back to its operating temperature range, between 0°C (32°F) to 45°C (113°F).

Storage

Store the battery in its original packaging. Do not store the PowerPad for more than 30 days. Turn on the PowerPad at least once within a 30 day period. Always store the battery in a cool and dry place between 15°C (°F) to 35°C (95°F). If the PowerPad is stored for 30 days, make sure the PowerPad is turned OFF and has at least 60% of capacity.

WARNING:

When the PowerPad is heated or exposed to temperature above 45°C (113°F) while it is stored, it may lead to heat, smoke, fire or explosion.

Maintenance

Although lithium ion batteries require no maintenance, it is recommended to periodically clean the PowerPad. Before you clean your PowerPad, first put the PowerPad on a stable surface and turn it off. Be sure to unplug all the connectors from the PowerPad. Wait for the PowerPad to cool down. Then use a dry cloth to remove the dirt and debris from the PowerPad.

WARNING:

Do not open the PowerPad. Do not use any cleaning solvents, soap, water or any liquid to clean the PowerPad.

Transportation

Transporting rechargeable lithium ion batteries are in most cases, limited or prohibited without obtaining permits and following regulations. Check all applicable local, national, and international regulations before transporting the lithium ion battery.

As of January 2013, lithium ion batteries are required to be compliant with IATA (International Air Transport) regulations for air shipment. Full information of the IATA regulation can be found at: http://www.iata.org/lithiumbatteries

Disposal

Many countries prohibit the disposal of waste electronic equipment. Lithium ion batteries are subject to disposal and recycling regulations that vary by region. Check your local regulations before disposing PowerPad.

IMPORTANT:

Before disposing or recycling the PowerPad, make sure it is turned off and fully discharged.

Trouble Shooting

The following table provides solutions for problems that may arise. If you do not find a solution for you specific problem, or the problem continues after trouble shooting please contact Electrovaya Customer Service at 1-905-855-3074 or at customerservice@electrovaya.com .

Problem	Cause	Solution
PowerPad does not turn on after turning the ON/OFF switch on.	The PowerPad is outside of its temperature range.	Keep the PowerPad to its operating temperature range between 0°C (32°F) to 45°C (113°F).
	The remaining capacity of the PowerPad is low.	Charge the PowerPad.
	The state of the battery is not healthy.	Contact Customer Service.
PowerPad cannot provide power (discharge)	The PowerPad is outside of its temperature range.	Keep the PowerPad to its operating temperature range between 0°C (32°F) to 45°C (113°F).
	The remaining capacity of the PowerPad is low.	Check the battery level indicator lamp. Charge the PowerPad.
	The power specifications of the DC device(s) is not within the range of the PowerPad.	Check if the voltage of the electronic device(s) is between 12- 16 V DC and the total power is under 300 watts.
	The state of the battery is not healthy.	Contact Customer Service.
Cannot charge the PowerPad	The PowerPad is outside of its temperature range.	Keep the PowerPad to its operating temperature range between 0°C (32°F) to 45°C (113°F).
	The power specifications of the charging source are not within the same range of PowerPad's input specifications.	Check if the AC input source is 110- 230 V; 50/60 Hz or the DC input source is 12- 18V.
	The state of the battery is not healthy.	Contact Customer Service.
PowerPad makes a steady beep and shuts down while charging	The PowerPad has very low capacity	Contact Customer Service.